

FORMATION OF OHMIC CONTACTS IN III-NITRIDE LIGHT EMITTING DEVICES

ABSTRACT OF THE DISCLOSURE

P-type layers of a GaN based light-emitting device are optimized for formation of Ohmic contact with metal. In a first embodiment, a p-type GaN transition layer with a resistivity greater than or equal to about $7 \Omega \text{ cm}$ is formed between a p-type conductivity layer and a metal contact. In a second embodiment, the p-type transition layer is any III-V semiconductor. In a third embodiment, the p-type transition layer is a superlattice. In a fourth embodiment, a single p-type layer of varying composition and varying concentration of dopant is formed.